THE Soybean Digest

Official Publication

OF

THE AMERICAN SOYBEAN ASSOCIATION

VOLUME 3 • NUMBER 6 APRIL • 1943

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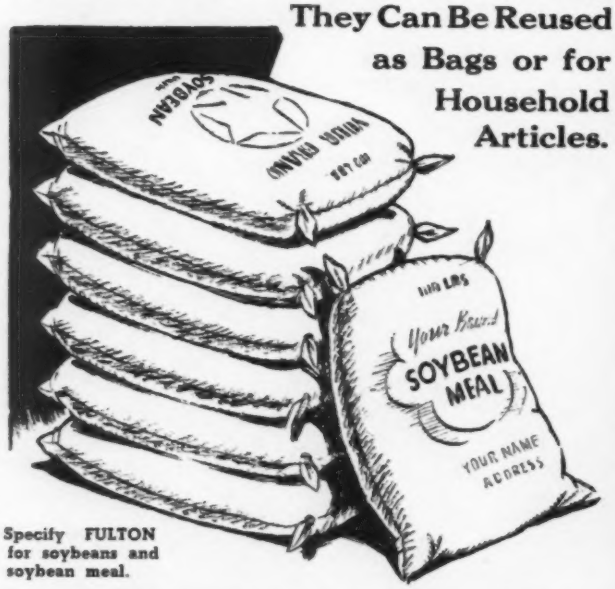

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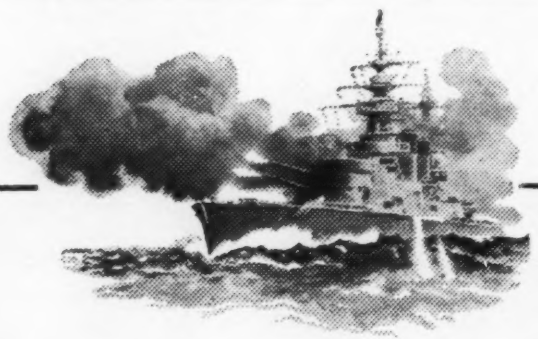

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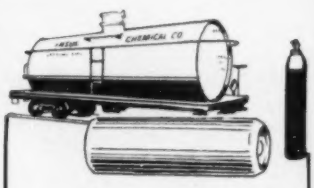

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THE Soybean Digest

GEO. M. STRAYER, Editor KENT PELLETT, Managing Editor
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THE AMERICAN SOYBEAN ASSOCIATION

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GIVE ALL A VOICE

THE Commodity Credit Corporation, as well as other governmental agencies, is at work on the 1943 soybean marketing program. The Soybean Industry Advisory Committee has been meeting, and has formulated recommendations for submission to WPB regarding processing facilities. The soybean crop will soon be planted. The role which the crop is to play in the war effort has been determined.

And even yet there has been, to our knowledge, absolutely no representation from the men who grow the soybeans. The processor of the soybean crop has much at stake, and he has been represented. The governmental agencies concerned have been represented. The man who grows the soybeans — the man who determines the success or failure of the entire program — the man who does the work upon which the rest is built — has been allowed no representation.

We have repeatedly pointed out that had a few of the men who grew up with the soybean industry been consulted on the 1942 program many of the very obvious — and serious — mistakes would have been averted. Programs affecting the war-time farmer who must work longer and faster than ever before, with less help and less equipment, can never work out when written from the top down. *All* segments of the industry should be represented in the planning. No other procedure is fair and democratic, and no other can work for any length of time. Give representatives of the soybean growers of the nation a voice in the planning of the acreage, the marketing of the beans, and the utilization of the meal, and you will see things written on a sound, calculating basis evolved out of years of contact with the industry. And we mean no slurs to the processors or to other groups. Without consulting them we are sure they agree with us. A sound long-time soybean processing program is dependent upon a sure source of soybeans and a profitable market for soybean oilmeal.

And not only should the grower of soybeans be represented. The local grain dealer, who is the buyer of soybeans within the community, has handled the 1942 crop at a loss. He is the man who takes the shrinkage, is responsible for the grade, does the handling and the storage, and enables a steady flow of beans to reach the processor. He has been asked to do all these things on a margin of 4 cents per bushel. It can not be done.

UNLESS THE GROWER AND THE HANDLER OF SOYBEANS, AS WELL AS THE PROCESSOR AND THE GOVERNMENTAL AGENCIES, ARE CONSULTED IN THE PLANNING OF SOYBEAN PROGRAMS, THE ENTIRE INDUSTRY IS RIDING FOR A FALL. Before it is too late — while there is still time — let's get *all* phases of the industry represented.

Who is to take the initiative for doing so? There is already a purported industry committee — the Soybean Industry Advisory Committee. Are we out of order in suggesting that soybean growers and soybean handlers be invited into membership? By the present committee? A copy of this editorial is going to the chairman of that committee.

SALUTE TO CHEMURGY

THE National Farm Chemurgic Council closed its ninth conference in Chicago March 25. It was highly successful. Far from folding up under the impact of the war, the chemurgists are one group that have been stimulated to vastly greater activity by its demands.

Only a few leaders, such as Louis Taber, George Washington Carver and Henry Ford, had the chemurgic idea 10 or 20 or 30 years ago. These few then realized the intricate relationship existing between industry and agriculture and were preaching that more and more of the raw materials of industry should come direct from the farm.

The chemurgists were the ones who combated most forcefully the philosophy of scarcity that pervaded our national thinking during depression years. They insisted that if we found new outlets for farm products instead of cutting production we might at one stroke provide a market for the farmer's surplus and work for industry's unemployed.

The prodding of the chemurgists was at least in some measure responsible for the fact that the Department of Agriculture now has four research laboratories where experiments are carried on in developing new uses for farm products, with pilot plants where the experiments may be put on a practical basis. This work of course is in addition to the large number of research laboratories maintained by industrial firms.

The soundness of the chemurgic approach is well demonstrated by the fact that although called into being to deal with farm surpluses it is now asked to cope with acute shortages. Just two examples of the many products under discussion at the conference recently closed are the soybean rubber now in large scale production by several firms and plastic parts for cream separators. And chemurgy should stand us in just as good stead when the pendulum swings the other way again, toward surpluses.

The success of the soybean dinner at the conference this year and the fact that soybean leaders were prominent on the program proves that soybeaners are heart and soul in the chemurgic movement.

The New Soya Kitchen

● DEVELOPS SOY FLOUR USES

THAT soy flour and soy grits can be used and will be used very frequently by the housewife has been demonstrated in the Soya Kitchen, recently established in Chicago by the Soy Flour Association. This new Soya Kitchen quietly established by the Association in January is devoted to research on the most practical and convenient ways of using soy flour and soy grits in the customary dishes to which housewives are accustomed and in the manner in which they are accustomed to using various foods in cooking.

This kitchen is in charge of Irene Hume Taylor and Lucille Craven, both of them highly experienced home economists who have established national standing. In addition to serving a number of food companies in the past in the setting up of home economics' departments and in the national demonstration of food products, Miss Taylor and Miss Craven have, over a number of years, maintained their own cooking school in which housewives and nutritional leaders pay tuition for the course. They were recommended to the association by national home economics' leaders as most likely to properly interpret the customs, habits and desires of the housewife in the practical use of food products.

Used in Gravy

The use of soy flour for gravy has been demonstrated as ideal and convenient. Gravy made with soy flour is never raw as are so many gravies, nor is it lumpy. It does not have to be stirred so carefully as other gravies, since it tends to cook smooth without stirring. The gravy is never raw because soy flour and soy grits are nutritionally pre-cooked in processing. This appears to be one of the most effective uses of soy flour in the meat shortage, due to the immediate recapture of fresh, tasty meat fats incorporated with a very high percentage of protein, so that the gravy is almost as rich in protein as is the meat.

As a thickening for meat stews and for soups with a meat base, soy flour has been demonstrated in this kitchen to add a tremendous amount of protein with a very satisfactory flavor. Heretofore much of the emphasis on soy flour and soy grits has been for use in meat loaves, hamburger and pork sausage to extend the protein value and to prevent the fry-away and loss of fats. These old standard uses have been reviewed in the kitchen and demonstrated to be very convenient and very sound.

Custards

A wide new field of practical uses has been demonstrated in the creaming of vegetables. A can of peas thickly creamed with soy flour provides a natural blend of flavors, with the nutritional result of doubling, or practically doubling, the protein value of the can of peas. The creaming of other vegetables has yielded similar protein returns by the simple customary adding of soy flour to vegetables to produce the thickness of creaming desired by the individual cook.

The preparation of desserts was first approached in this kitchen to round out the field rather than to add protein to desserts. However, a wide variety of desserts of the general custard type prove to be unusually well adapted to the utilization of soy flour in the diet.

The soya kitchen did some cooperative work with the National Confectioners' Association in studying the relationship of soy-flour to the making of different types of candies and the different parts of commercial candy bars and other candies. The results are quite surprising. Not only could 10 percent of protein be added to candy to give it a proper food nutritional balance, but the necessary cooking temperatures were reduced from 10 to 12°, thus preserving a greater proportion of the vitamin B complex of the soy flour and preserving in the candy practically enough vitamin B to accomplish metabolism of the normal sugars and other carbohydrates in candy itself. This addition of protein and vitamin B to candy has been urged by nutritional authorities at Washington, who have been interested in the relationship of candies to the food needs of war-plant workers.

The major use of soy flour seems to be baked products in the home and the soya kitchen has demonstrated a very simple method of adding soy flour to any customary bread, cake, pie or other baked product made in the home. Placing 2 tablespoonfuls of soy flour in the cup and filling the cup with wheat flour produces a soya mix that may be used in any customary recipe for baked goods to which the housewife is accustomed, without any further change in ingredients, except to add a little more liquid and a little more salt. Since it has been demonstrated by biological research by the Bureau of Chemistry in Washington that such a mixture will produce four times as much growth as the protein in the wheat flour alone, any bakery uses are of basic nutritional importance. Now, the Soya Kitchen has demonstrated that they are extremely practical and extremely convenient.

Many recipes have been developed else-

(Continued on page 14)

A Wartime Pledge to Our Customers

Today, we are unable to meet the demand for Swift's Soybean Oil Meal. We hope this shortage will be reduced in the months ahead. Meanwhile, we make this pledge to you: we will distribute fairly and impartially the available supply of Swift's Soybean Oil Meal.

SOYBEANS IN THE SPOTLIGHT

With a huge 1942 soybean crop feed dealers and farmers alike are wondering why there should be a shortage of soybean meal.

Global war has cut imports of protein feeds. Usual imports of tankage, meat scraps, fish meal, oil meal have been cut off. Large exports of dried skim milk to our allies have further cut into ordinary protein feed supplies.

Huge numbers of livestock on feed. There are more livestock on feed today than ever before in the nation's history. And conditions are favorable for feeding high protein rations. This has created a great demand for all protein feeds, including soybean oil meal.

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. . . say Food Production Administration, USDA and Other Experts . . .

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The growers must beat even their unprecedented soybean yield of '42 this year. It can be done.

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Soybeans in the INDIAN DIET

By DR. MANUEL GAMIO

Translated from the Spanish by
Edna O. Miller

ONE of the principal reasons why the agricultural and industrial production of the Indian-Spanish countries of America can not meet satisfactorily the requirements of their own people or the urgent demands of the markets of the allied nations in this period of war is the deficiency in the diet of the people. Their diet and especially that of the Indian farmers, which continues to be essentially the same as it was before the Conquest, is so unsatisfactory that their physical energy is below the normal level and their work is not as effective as could be desired; consequently this condition is reflected in the amount of the agricultural and industrial production. Among the Indians of Mexico, for example, the constant basic diet consists of corn, peppers, and their derivatives; beans and a few other vegetables are infrequently used; therefore these people get an insignificant amount of proteins and other nutritive elements, except carbohydrates in which corn is rich.

For a long time we have realized this deplorable situation, but it has been practically impossible for the government and the Indians themselves to normalize this poor diet by adding to it meat, milk, eggs, bread, vegetables, and other foods, for the Indians lack economic facilities for the accomplishment of this end and the entire national budget would not be sufficient to multiply by a hundred the existing herds of stock, the poultry, the harvests of wheat and vegetables, etc.

Even in 1929 when we attended the third conference of the "Institute of Pacific Relations" held in Kyoto, Japan, we knew of the high nutritive value of the soybean and we realized that its cultivation and use in Mexico would solve both biologically and economically the difficult problem of food for the people. Unfortunately because of different circumstances, the attempts made during the campaign undertaken after that time did not meet with appreciable success.

Begin in Mexico

Upon recommendation of the First Inter-American Indian Congress of 1940 and of the Board of Directors of that Institute, there was presented to the Office of the Coordinator of Inter-American Affairs and the Department of State a project that has for its objective bettering the nourishment of the Indians of America by the use of the soybean and its derivatives. This project is to begin in Mexico, since in this country almost all the preliminary studies have been made which are necessary to put the plan into practice. It is hoped that most of the necessary funds will be furnished by the government of Mexico, the Office of Coordinator of Inter-American Affairs, and the Institute.

DR. MANUEL GAMIO

● *Dr. Gamio, Director of the Inter-American Indian Institute and Editor of the* BOLETIN INDIGENISTA *at Mexico City, has long worked for the economic betterment of the Indians of his country. A project involving soybean culture to improve the diet of the Indians and sponsored by the Institute and Mexican government is under way in the state of Hidalgo.*

Besides, the governor and ex-governor of the Mexican state of Hidalgo, in which is located the Valley of Mezquital where the project of the Institute will be undertaken, have occupied themselves for some time with the betterment of the miserable economic conditions of the Otomie Indians who live in this valley. They finally interested the President of the Republic, General Manuel Avila Camancho, who devoted three days to visiting the place together with the gentlemen mentioned above, several members of his cabinet, and the author of this article. As a result of this visit, the President has arranged to invest the sum of eight million pesos in works of irrigation, sanitation, development of local industries, planting soybeans, etc.

Already Cultivated

The project of the Institute is confined to only one section of the valley, where soybeans will be planted and kitchens set up in which the Indians will be taught to season and use the foods which can be derived from soybeans, a task which will have the object of overcoming the traditional resistance to new kinds of food. In addition to this, in another section of this same valley that is dry, where soybeans can not be raised, new industries will be established so that with the products from them the people can secure soybeans for their food. The cultivation of soybeans is as economical in Mexico as that of corn; some varieties have already been successful in similar Mexican regions, and the Board of Directors of Agriculture has succeeded in adopting some of them systematically.

In parts of Mexico, principally in the northern plateau, this legume is already being cultivated on a considerable scale, but we understand that its production will be devoted chiefly to industrial uses and perhaps to exportation.

If, as is very likely, good results are ob-

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Scenes taken near the International Highway in the Otomi Indian region in the state of Hidalgo, where the soybean food project is being undertaken.

PROBLEMS of the SOYBEAN GROWER

G. G. McILROY

By G. G. McILROY

• Growers blame lack of labor and equipment for failure to harvest soybeans last fall. These were not the only factors, says Glen McIlroy, president of Farm Management, Inc., Irwin, Ohio, and former president of the American Soybean Association. He ought to know. He grew 175 acres on his own farm last year. Mr. McIlroy's remarks were made before the soybean dinner of the annual Farm Chemurgic Conference at Chicago March 25.

THE problems of the soybean grower at this time are on the wane. He is guaranteed a fair price by our government; and, in the amount he can grow, the sky is the limit.

Those of us who have been soybean growers for the last twenty-five years well remember times when the price was low and acreage limited. We feel that our opportunities today are as promising as ever before. Of course, we do have problems. These difficulties are evidenced today by the thousands of acres of unharvested beans over the soybean belt which are practically worthless as marketable beans.

We are continually reading that this catastrophe was due to lack of labor and equipment only. That is partially true. But there is another factor which figured in this situation to a greater degree than most of us will acknowledge.

Key to Success

A few weeks ago, I sat in a group of expert farm men. Some of the number had been growing soybeans successfully for years and years. Someone asked what we thought to be the actual key to successful soybean production. An answer came promptly from the member of the group who, in my opinion, was the best qualified to give an answer. It was one word only, and that word was "Alertness!"

How correct he was!

Webster's dictionary says "alertness" refers to the ability to be quick, nimble, to move with celerity, prompt, ready to take advantage of opportunities.

Friends, that's what it takes to be a successful soybean grower.

Last fall we had lots of new growers and among them our failures in harvesting are more noticeable. These new growers had not learned to be "nimble and quick" and to take advantage of opportunities offered.

It was my personal observation that old successful growers, with few exceptions, harvested their entire crops and have already paid their first installment on their income tax on farm proceeds so derived.

Exceptions

Certainly there are exceptions — cases where there was ample and good reason for failure. Some of my neighbors would agree with that statement.

On my own farm we had 175 acres of soybeans. For the harvesting we had two combines — one 10-foot cut and one 6-foot cut. Although we had made no definite commitments as to harvesting our neighbors' beans, it was understood among my own men that when we finished our crop we would help anyone in our community who needed assistance. What happened was this — Our 10-foot combine broke down after the first five hours' operation and we had to have some new castings before it could be started again. I telephoned the implement branch at Columbus where I was told the needed repairs would have to come from Chicago. I asked that they wire or telephone at my expense as it was imperative to avoid all possible delay. I was then told that they had been instructed by the Chicago repair department not to wire in or telephone in for repairs as they had no facilities for handling such orders.

The final result was that the necessary parts were received in good shape some time in December after all chance for combining was past. The order had gone in in October.

We finished our 175 acres with the one 6-foot combine and helped a neighbor for one day before combining for 1942 stopped. At present time there are 150 acres of unharvested beans that would have been saved had we been able to get our repairs promptly.

1943 Problems

The problems of the soybean grower in 1943, as I see them, appear to be more numerous than those encountered last year. In '42 we had good planting conditions pretty generally throughout the corn belt following the fall of 1941 when it was possible for the farmers to do a lot of plowing. This fall-plowed land in Ohio gives us our best soybean seed bed.

A minimum of plowing has been done at this time. If we have a wet spring it will mean that a lot of beans will go in the ground under improper conditions.

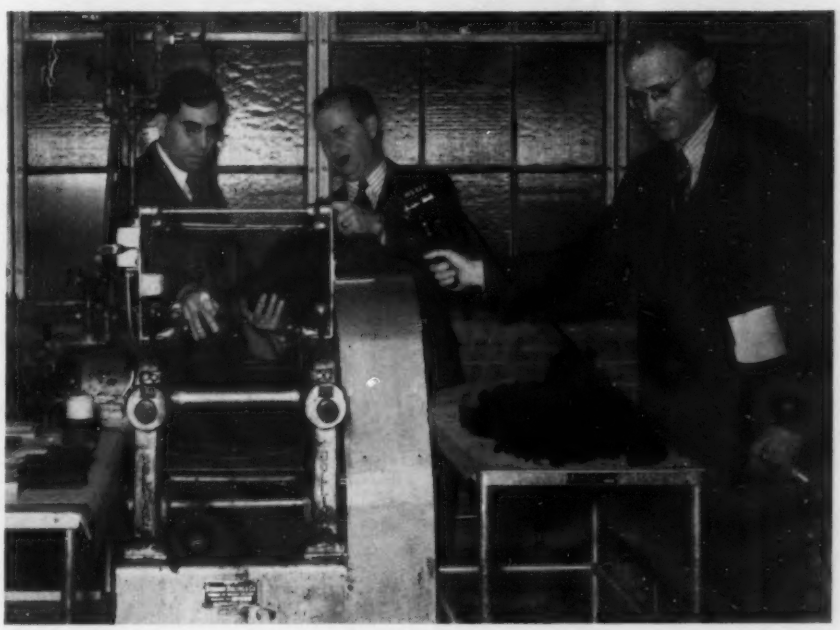
In addition to the problem of overcoming bad soil conditions we are faced with a shortage of equipment and labor and a chance that spring crop work will be delayed on many farms on account of man labor hours necessary to complete last year's farming — to harvest the corn and what is left of the soybeans.

All in all, our chances for getting away to a good start are *bad*. We may have our '43 crop curtailed in the spring as our '42 production was at harvest. It will require a Kind Providence to save us this spring and summer.

This fall we may have more combines, probably will have less labor, but I would expect to have weather more favorable to harvesting than we had last year. I am sure that many new growers have learned a lot by sad experience, and these men will be on their toes when another harvest time comes.

Soybean Rubber on the Air

The story of Norepol, soybean rubber, was recently broadcast to the world through the facilities of the Blue Network from the Northern Regional Research Laboratory at Peoria, where it was developed. Here Wallace L. Kadderly, right, Chief of the USDA Radio Service, picks up a broadcast of Dr. R. W. Manly of the Laboratory, and William E. Dripps of the Blue Network running Norepol through the rubber mill. Several firms now have the product in commercial production.



PROBLEMS of the SOYBEAN PROCESSOR

By D. J. BUNNELL

THIS year has been a milestone in the history of the Soybean Industry. It has become of age. In this war-time economy we are the biggest producers of domestic vegetable oil. This industry is the largest source of protein concentrate so necessary to balance rations for quicker, better production of meat, milk and eggs.

The rapid expansion of soybean production during the last decade is well known. It is not nearly so well known, however, that processors, with their confidence in the future of the industry, had the courage to enlarge plant facilities even more rapidly than the crop itself was increased.

The rapid growth of plants through the bean belt developed a problem to processors. The supply of beans was never sufficient to permit year around capacity operations. As early as April and May each year some plants were forced to close down and by midsummer a large portion of the industry was operating at only part capacity. The indicated large production of last season gave processors, for the first time, hope for a capacity grind all through the year.

Speed Up

Because of the prospective big crop the industry was asked to increase capacity. Use of critical materials had to be limited to the production of implements of war. We were restricted to the development of more efficient methods and the application of speed up of machinery. Last October, the first month of the current season, there were crushed more than 6½ million bushels. Each month this amount has progressively increased, until February, the short month just past, 10 million bushels of soybeans were converted into soybean meal, soybean oil and soybean flour by the processing plants in the bean belt. This remarkable performance indicates an annual capacity of 120 million bushels, with the same plant facilities that had never handled more than 70 million bushels in any previous year.

Additional beans are being crushed in flax plants on the East Coast, in copra, flax and cotton plants on the West Coast as well as in the cotton mills of the South from Georgia to Texas. These operations, outside the bean belt, were undertaken as a measure to handle what was thought to be a surplus over and above that which could be handled by the regular facilities of the soybean industry.

We are now half way through the 1942-1943 crop year. How does the problem of handling this much talked of "Large Production of Soybeans in 1942" look to us now?

Not All Harvested

A government crop estimate is always subject to revision after the history of the crop movement is completely known. I find myself in the company of a number of experienced men, when I draw the conclusion that the crop has been over estimated. The behavior of the movement itself and the report of yields up to the present time indicate that the crop will fall short about 15 million bushels of the early estimate. This would reduce the crop to 195 million bushels. A large crop, like that grown last year, requires a longer harvesting period. This situation was aggravated by adverse weather conditions in November. Field operations were interrupted, with the result that untold thousands of acres went into the winter unharvested. Soybeans harvested during the winter have shown a serious reduction in yield. A large acreage still remains unharvested. Farmers will not have time this spring to salvage all that remains of a crop that should have been harvested last fall. A loss of 15 million bushels for these reasons is conservative, leaving a total of 180 million bushels.

In recent years there has been a farm disappearance of from 3 to 5 million bushels. The favorable feeding ratio, together with the fact that farmers have needed more protein than ever before, have caused the use of increased quantities of soybeans on farms. This disappearance will have to be enlarged to at least 15 million bushels. Again available supplies must be reduced to 165 million bushels. Accounting must be made of approximately 25 million bushels to plant the next crop. This will reduce supplies available to processors to 140 million bushels. An additional fact is still to be taken into consideration. There is never a complete clean up of any agricultural crop at the end of a crop year. This carry-over will amount to several million bushels through all bean producing areas.

Beans being crushed in the South and on

(Continued on page 9)

D. J. BUNNELL

• *The 1942 bean crop was overestimated and processors are still worried about securing sufficient beans for year-around plant operation, says D. J. Bunnell, vice president of Central Soya Company, Inc., Chicago. His speech was given at the annual Farm Chemurgic Conference at Chicago March 25.*

Commodity's Bean Troubles

By J. H. LLOYD

• *Assuring processors a sufficient supply to keep operating full blast, drying up of country movement of beans, a protein famine in some localities, and green beans are just some of CCC's headaches, said J. H. Lloyd at the soybean dinner, annual Farm Chemurgic Conference, in Chicago, March 25. Mr. Lloyd, formerly an Illinois county agent, is now assistant regional director of CCC at Chicago.*

AS EVERYONE knows, Commodity is in the soybean business because this war, like all other wars, has created a larger than normal demand for vegetable oils and, at the same time, has reduced supplies.

Last fall the crop yield was estimated at approximately 210,000,000 bushels, an increase of almost 100% from the 1941 production, which, in turn, was the highest on record. Today I am of the opinion that the 210,000,000 bushel figure will not be reached by perhaps 20 or 25 million bushels, principally because of shrinkage due to unfavorable weather for ripening and for harvest over much of the soybean belt.

J. H. LLOYD

It is the task of Commodity to accomplish the processing of the crop and a prompt and orderly distribution of the products — oil and meal. At the same time, provision has had to be made for increased production of soy flour and for a limited amount of soybeans for export by the Federal Surplus Commodities Corporation.

With a prospect of around 140 million bushels of soybeans to be available from the 1942 crop for processing, Commodity set out to contract with plants in the normal soybean processing area of the country, and with processors located in other areas.

Since soybean oil must be marketed within ceiling prices established by the Office of Price Administration, and because it was deemed advisable to furnish soybean oil meal to livestock producers at relatively low prices, the contracts, or rather all but one of them, were so drawn as to provide a processing subsidy. The notable exception is the so-called Form A contract, under which each of the 11 solvent (extraction) plants which are processing soybeans are operating. Under that contract there is no subsidy, with the exception of a $1.00 per ton payment by Commodity on soybean oil-meal sold in certain areas by such contracting processors at a full $2.00 per ton under Decatur base price.

Commodity entered into 65 plant contracts with 49 companies, covering the soybean processing operations of practically all plants in the so-called normal soybean processing area, extending from Minnesota to Kentucky and from New York to Nebraska. In addition, four contracts, covering an estimated 3,650,000 bushel crushing capacity, were entered into with four processing companies in Kentucky for operation primarily on black soybeans.

Arrangements were effected for the processing of southern grown soybeans in 61 advantageously located cottonseed and peanut mills (principally hydraulic) operating under so-called cotton states contracts. It is estimated that around 6,000,000 bushels of soybeans have been crushed to date by those mills.

Pacific Coast

Contracts were also written with nine Pacific Coast processing plants (principally expeller) which normally operate on copra, cottonseed and flaxseed, covering the processing of approximately 5 million bushels of Iowa, Nebraska and Kansas soybeans.

Other contracts were entered into with two processors whose Edgewater, New Jersey, plants (principally hydraulic) ordinarily operate on imported flaxseed, covering the crushing of 8 million bushels of mid-western grown soybeans.

In addition, contracts were written with southern processors located all the way from West Texas to North Carolina, and from Oklahoma to Florida, for the processing of around 15 million bushels of northern grown soybeans in plants (principally hydraulic) which ordinarily operate on cottonseed and peanuts.

With the exception of those 138 southern mills, processors contracted with Commodity to purchase and store the soybeans needed for the year's crush. However, due to a number of reasons, principal among which was the lack of storage capacity, many processors were unable to acquire during the normal harvest season sufficient stocks of soybeans to run until October 1 on a full-time basis.

Failure of processors to purchase during the harvest season soybeans disadvantageously located as regards movement of the meal on basis of transit privilege, created Commodity's number one problem last fall, but some new problems have come along to over-shadow that one. For illustration, last December, while we were in the midst of trying to find a home for the "off line" and "cross haul" soybean, country offerings disappeared — dried up at the source due to continued unfavorable weather for harvest and bullish sentiment among producers. There followed a scramble for soybeans with generally a dozen buyers for every car offered.

Due to that tight situation, Commodity is already confronted with the problem of furnishing soybeans to a few contracting processors whose stocks have vanished, and who are unable to purchase beans in their territories. And the crushing season is only six months old.

Farm Movement

It is believed that the considerable stocks of farm stored soybeans will soon move more freely into the processing channel, as a result of the recent OPA price order fixing a producer price of $1.66 for No. 2 grade or better yellow and green, and as seed demands are currently satisfied.

Commodity undertook through purchases by country elevators under contract to the Corporation, and through purchases by elevators and county AAA committees for storage in country warehouses and in Commodity owned bins, to meet the surplus bean problem at harvest time. Through this procedure, Commodity purchased and stored around 20,000,000 bushels of the 1942 crop and an additional 4,000,000 bushels were placed under loans.

We appeared to be making fairly satisfactory progress when along came the early freeze, with its attendant green bean damage problem. While phases of that problem and of the subsequent and related problem of storing and processing the late harvested heavily field damaged soybeans are still unsolved, I want you to know that Commodity has received 100 per cent cooperation from soybean processors in saving every possible pound of oil and meal from the frost damaged and late harvested crop.

Protein Shortage

Because of increase in livestock numbers and limitation of imports, the protein supplement feed problem has been and still is acute. A large crop of soybeans did not automatically provide a large supply of oil-meal. First the beans had to be processed.

Some meal from Commodity owned northern grown soybeans processed in southern plants has been distributed by the State and County USDA War Boards through feed mixers and through dealers for sale to livestock feeders located all the way from the Midwest to the Pacific Coast.

The Agricultural Adjustment and Conservation Administration's field force reports that farmers are whole-heartedly signing to increase their acreages of soybeans, particularly in the soybean belt to which area we must look for any sizeable increase in production.

Looking ahead, it seems to me that the primary problem and responsibility of Commodity Credit Corporation is to so shape this "controlled economy" program for our soybean industry as to permit the industry to grow and thrive after this emergency period has passed. *In my opinion, very careful consideration should be given to the problem of whether it will be better to continue to move part of the wartime crop of soybeans to the surplus crushing capacity of the country, or if perhaps Government subsidized processing capacity should be provided for the soybean belt. I believe this group and its individual members can help find and can influence the adoption of the right solution to that important problem.*

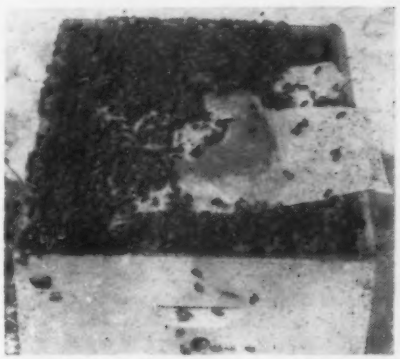
—s b d—

Bees Have Protein Shortage Too!

Beekeepers, as well as livestock producers, have their protein supplement problems. These consist in maintaining a supply of pollen, which the bees gather from flowers and store in the hives, during the spring brood rearing season. At this time pollen reserves are apt to be low and pollen can be gathered only intermittently from the fields.

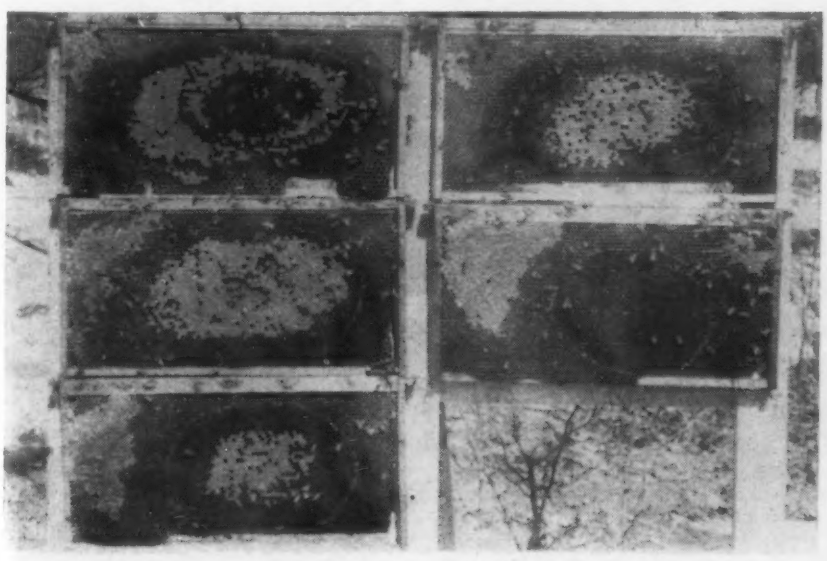
There are no commercial sources where pollen for bee feeding can be purchased, but a mixture of expeller processed soy flour with pollen can be used to extend existing pollen supplies and has proven satisfactory.

The U. S. Bee Culture Laboratories of Madison, Wis., have been experimenting with the use of soy flour in supplementing pollen in feeding bees during critical brood rearing periods since 1938. They recommend a mixture of 75 percent flour with 25 per cent pollen. The flour is actually a better source of protein than pollen, although the bees persist in liking the latter better.



The day is forecast when feeding of the flour-pollen mix will be a standard practice among beekeepers.

Above, a strong colony feeding on a cake of soybean flour supplemented with 26 percent pollen. Below, bee brood which has been reared on the mixture. Photos are from Dr. C. L. Farrar, U. S. Bee Culture Laboratories, Madison, Wis., and are by courtesy of American Bee Journal.



Soybean glue-laminated arches, which save steel for vital defense work, are being used in regimental Army chapels in cantonments throughout the country.

★ GROWERS ★

BEANS FOR ARKANSAS

Varieties most highly recommended for oil production in Arkansas by Charles F. Simmons, extension agronomist of the University of Arkansas are Arksoy and Arksoy selections, such as Arksoy 2913 and Ralsoy; Ogden; and Mamloxi. Other recommended varieties are Arkan, Tokyo, Wood's Yellow, Delsta, and White Biloxi. The Macoupin variety, the earliest maturing soybean grown for oil in Arkansas, may be recommended where earliness is of great enough importance to offset low yields. Plantings of Macoupin should be limited to the higher producing bottom land soils. The Biloxi variety is the latest maturing oil-type grown in Arkansas. Because of its rank growing nature, which may make combining difficult on highly productive soils, Biloxi beans are recommended only on upland soils.

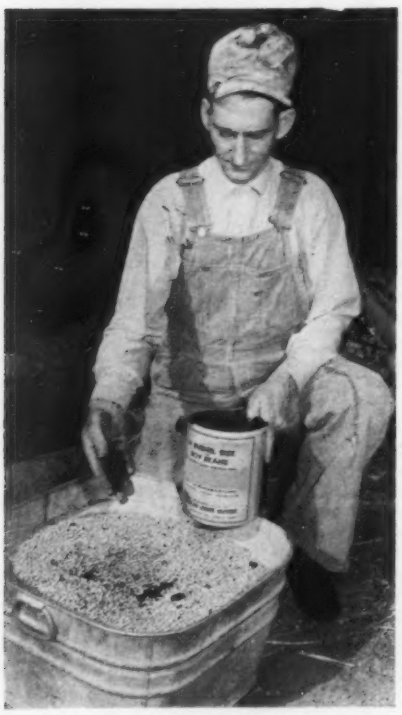
Time of planting has little influence on date of maturity, except when planted very early or very late. When the beans are planted from late April until early June, they will mature at approximately the following dates under average conditions: Macoupin, September 15; Arkan, October 1; Arksoy, October 9; Ogden and Tokyo, October 12; Delsta, October 27; Wood's Yellow, October 29; Mamloxi, October 31; and Biloxi, November 9.

Harvesting may be spread over a long period of time by using two or more varieties. However, the major portion of the crop should be planted to medium maturing varieties, such as Arksoy or Ogden; the acreage planted to beans maturing at the same time should be limited to that which can be harvested before excessive losses occur from shattering. Sometimes beans will stand without such losses for a month or more, whereas at other times heavy shattering will occur within a week after maturity, depending on weather and soil conditions.

Planting Time's Coming

J. Frank Judge, Boone County, Iowa, farmer, inoculates soybean seed for planting, one necessary step in all out bean production.

— USDA Photo by Forsythe



MINNESOTA VARIETIES

A. C. Arny, University Farm Agronomist, St. Paul, Minn., states that all varieties produced within the state of Minnesota are not suited for planting in all parts. Richland and Mukden varieties are recommended for the southern corn zone, Habaro and Manchu for the south central and Habaro for the central.

Arny reports that Iowa farmers have purchased more of the Minnesota grown seed than have Minnesota farmers. Unless this available seed is purchased at once by Minnesota farmers who need seed, they may be forced to use unadapted seed produced in states to the south, he says.

OATS AFTER SOYBEANS

With the advance of the corn borer with the assurance of his permanent residence, the method of seeding oats after corn should be discontinued, says J. E. Johnson of Champaign, Ill.

Ninety percent of the oats seeding is done in this manner, largely from custom, surely not from good reasoning. Is it not reasonable to assume that oats, a heavy user of nitrogen, should follow soybeans, a heavy gatherer of nitrogen? Sure, just simple mathematics. This cuts down the cost of production, a factor too much overlooked.

Soybeans should follow corn rather than oats. This permits the plowing under of the stalks and is a part of the three factors recommended in living with the corn borer. There is no good excuse for not plowing under crop residue with our present equipment and the knowledge we have.

BEANS ON CONTOUR

Soybeans and corn, which will be raised in greater quantity this year, are responsible for some of the greatest soil losses by erosion, according to C. Herman Welch, Jr., soil conservation project supervisor at University Farm, St. Paul, Minn. For that reason, Welch advises keeping corn and soybeans, as well as other row crops, on level land. If planted on sloping land, the rows should run on the contour, or at right angles to the slope, he says. If the slope is not too long, the whole field can be planted on the contour to the same crop. However, if the slope is long and very steep, it is better to plant the cultivated crops in contour strips not over 150 feet wide with strips of small grain and hay between. Purpose of these strips is to break up the flow of water as it runs off and so catch some of the soil being washed off the field.

CHANGE GROUND

L. E. Thatcher, Ohio State University agronomist, warns growers against planting soybeans on fields which produced that crop in 1942. Successive crops of soybeans increase the hazard of soil erosion and also take excessive amounts of the phosphate and potash from the soil. Either oats, barley, or corn is a better crop to follow soybeans than to repeat the soybeans.

Soybeans can be planted advantageously on corn stalk or corn stubble land, especially since the proposed reduction in oat acreage will cause farmers to use some other crop to replace oats. Small grain stubble fields which were not seeded or where the meadow seeding failed also are likely spots for soybeans.

—s b d—

BOOSTING BEANS IN KANSAS

"The Kansas farmer need not be satisfied with the state average soybean yield of 12 bushels per acre," states E. A. Cleavinger, Extension Crops Specialist of Kansas State College, as the theme for a series of 114 meetings being held in the eastern third of Kansas this spring.

"A survey of farmers raising soybeans in 33 counties shows clearly that by following recommended practices the Kansas farmer can best the state average by 50 to 100%. Of 132 farmers reporting their 1942 soybean operations, 58 or almost half, reported yields of 18 bushels or over. Twenty-nine fields yielded 25 bushels or more, and 10 farmers secured yields of over 30 bushels per acre. The top yield was 35 bushels per acre of A. K. grown on 15 acres by Roy Polfer of Johnson County, Kans.," reports Cleavinger.

When to Plant

Kansas farmers should grow Dunfield, Hong Kong, or A. K. soybeans, Cleavinger recommends. They should inoculate their seed, plant May 25 to June 10 on a firm seed bed clean of weeds, plant in rows and cultivate, combine their beans and follow all the best practices to get the best possible yields. Each of Cleavinger's points is illustrated for his listeners by actual samples taken from Kansas farms.

Assisting in the meetings is K. E. Soder, Agricultural-Industrial agent of Rock Island Lines who covers the wartime goals and uses of soybeans. Principal emphasis is placed on need for this essential oil crop. Soder reports, "The Kansas production of beans for grain has jumped from 312,000 bushels in 1940, to 564,000 bushels in 1941 and 2,544,000 bushels in 1942. The goal is now 137½% of last year and the production will probably be in excess of 4,000,000 bushels in 1943. This increase has brought a strong demand for additional processing capacity in Kansas which will be met as soon as priorities are available." Soder's talk is illustrated with soybean products and examples of the new wartime uses of soybean products.

"Evidences secured from the 2,845 farmers attending our 105 meetings held up to March 8th make us very confident that the Kansas farmer is becoming soybean conscious and will make every effort to meet and surpass the 1943 Kansas soybean goal," concludes Soder.

—s b d—

IMPORTANCE OF PROTEIN

Protein may win or lose the war, according to Dr. Percy L. Julian, research director of the Glidden Co., Chicago, who delivered a lecture at the University of Buffalo, in which he emphasized the importance of the soybean as a source of protein. He declared that in 1943 America faces a shortage of 3,500,000,000 pounds of meat representing a protein shortage of 600,000,000 pounds, if we continue to feed our Allies, our armed forces and our civilian population at the present rate.

Soybeans at Night School

People at the Dietz School inspect the soybean exhibit of the American Soybean Association. Left to right, Fred Dietz, L. J. Phipps, Dr. R. C. Cassell and wives of farmers attending the school.

CLASSES IN SOYBEANS

By R. W. SHIRER

Agricultural Agent, Illinois Central Railroad Chicago

TAKING their cue from the December, 1942 issue of the *Soybean Digest*, the boys in Southern Illinois are doing things about the educational problems of the soybean industry. That is evidenced by the size of the Soybean War Production Class being held at the Dietz rural school district in Jackson County, under the direction of Dr. R. C. Cassell, Assoc. Prof. of Agriculture, Southern Illinois Normal University. The picture denotes a typical night meeting, which is being conducted two hours a week over a ten week period and the subject, all of it, soybeans.

Twenty-Seven Courses

This is one of the twenty-seven War production courses organized by Mr. Lloyd Phipps, Vocational Agriculture Instructor, University High School, Carbondale, Illinois. Dr. Cassell and Mr. Phipps were assisted in the courses on several occasions by Agricultural Agents of the Illinois Central System. The latter organization headed by P. R. Farlow, General Agricultural Agent, Chicago, was represented by the author. As can be seen in the picture the program was illustrated as well as discussed.

Dr. Cassell has been unusually successful in this type of adult farmer's meetings. It is his firm conviction that this is the most logical approach to the farmer's confidence and problems. Where the farmers of a district can meet with their families at their rural school and discuss their problems while spending a social evening, the shackles are down and the meeting wide open.

Diversification of interest has been the key to success at the Dietz district soybean course. Note in the picture, the use of the soybean exhibit loaned by the American Soybean Association. Other pointers of success may also be obtained by a study of the picture. Guests are always welcome on Dr. Cassell's programs. The Illinois Central System's movie projector is in evidence at this meeting. Bulletins of all kinds pertaining to soybean culture and industries are helpful in putting across the subject matter. Soil testing kits are on the table.

Finally, to close the meeting a big piece of pumpkin pie does not detract much from soybeans. Especially is that true when the folks crunch along all evening on salted soybeans. At least Dr. Cassell feels that it will all add up to more soybeans with less production costs in Southern Illinois.

—s b d—

PROCESSOR PROBLEMS

(Continued from page 6)

the East and West coasts represent a further reduction of supplies available to regular soybean processors.

These statistics have been given to you in detail, for they lead to a conclusion that no one in the industry — and certainly not I — thought possible last fall. *The old bug-a-boo of getting beans to run our plants is still with us.* Slow movement these past two and one-half months, at a time when plants were operating at capacity, has made serious inroads on storage stocks at mills. These stocks were earmarked for consumption during the late spring and summer. Each day that passes where the processor is not able to purchase his daily crush is a threat to his chance for any kind of satisfactory operation through the summer. Full year operations will be dependent upon a steady, continuous country movement. The answer to this problem can only be found as the situation develops in the remaining months of the crop year that lie ahead.

A 6c MARGIN FOR HANDLERS?

Editor *The Soybean Digest:*

We agree with you, that the margin on the 1942 crop of soybeans was too low considering the amount of money involved and the shrinkage that we have in handling the beans. A good number of nearby dealers would not handle them at the 1942 margin.

And again it causes a loss where the beans have to be handled along with corn, wheat, and oats, as the augers do not clean out, and there are always beans in wheat, and other grain, as well as the other way around. Therefore we have dockage for which we receive nothing.

I think in view of all things mentioned, the handlers should have about 6c per bushel on the 1943 crop.

Yours truly,
Belleville Cooperative Grain Company
Belleville, Illinois

Editor *The Soybean Digest:*

We last fall handled CCC beans for 4c per bushel margin, which you know is ¼c less than was given to the elevator operators in the central soybean states. We can positively tell you that the 4c per bushel margin does not give us cost of operation, to say nothing about the wearing out of our machinery, which as you know, is now hard to get repair parts for, and leaves nothing to take care of obsolescence and depreciation.

On account of the fine harvesting weather that we experienced the beans came in so fast to us that we had to work our crew overtime, many times keeping them on duty over 60 hours. This of course meant that we paid them time and a half for all time over 40 hours, which ran our cost up considerably more.

Any elevator operator who thinks he can handle soybeans at 4c or 4¼c per bushel and split even on doing so is certainly kidding himself. If he has any doubt about this, he can easily settle this doubt in his own mind by keeping books on the transaction, and he will soon find out that it can not be done.

We feel that the CCC is asking too much of the country elevator operators in handling soybeans at a loss. We want to do everything in our power to help in the war effort, but we feel we are being discriminated against when some bureaus of the government will fix prices for a certain class of business to operate under, and then let union labor run wild in their demands, and then always have these demands granted. It appears to us that anyone with property in these times, has no rights whatsoever.

We expect to handle milling soybeans again this coming season, but not for 4c per bushel. We are willing to go to bat with the CCC ,and try and convince them that they are wrong in asking country elevators to operate at a loss.

Jacob Hartz Seed Company
By Jacob Hartz
Stuttgart, Ark.

—s b d—

A desperate protein feed situation has been developing in Texas, with the state's lamb, kid and calf crop imperiled.

With San Antonio mills closed due to a lack of cottonseed or beans to crush, mills have been restricting customers to 500 pounds of supplement each, says D. P. Crowley, San Antonio feed dealer. This is a serious limitation for ranchers living 50 or more miles from town under gas and tire rationing.

★ *SOYBEANS . . . . and People* ★

V-GARDEN SOYS

THE tremendous demand which developed during the winter for edible soybean seed indicates that many thousands of people, through Victory garden packets and otherwise, will be growing the garden variety for the first time this summer.

Food rationing, the meat shortage, and the trend from pleasure driving to backlot gardening are all partially responsible for a demand which has far exceeded the supply of seed.

Edible soys are palatable and nutritious. They contain large quantities of protein and fat, calcium, phosphorus and iron. They furnish a perfect protein equal in quality to the protein of meat and eggs and better than that contained in any other bean. Dry soybeans contain more protein and fat than other kinds of dry beans and are good sources of vitamins B and G. The green ones are rich in vitamin A.

They make a good fresh vegetable and may be cooked about the same as limas.

For Illinois

Of a large number of strains and varieties which have been tested by the Illinois Agricultural Experiment Station during recent years, some 12 varieties have been selected for good cooking and baking qualities, and for their agronomic characteristics of maturity and yield.

The earliest bean is known as the Giant Green. It can be used as a green vegetable bean in mid-August and matures during the first week in September. Medium-early types include Bansei and Fuji both approximately one week later than Giant Green. Midseason beans are Hokkaido, Jogun, Willomi and Wolverine, about 10 days later than Giant Green. The late group includes Illington, Imperial, Funk Delicious, Emperor and Higan, all from 16 to 23 days later than the earliest variety. All are of excellent quality.

Three vegetable varieties especially recommended by the Iowa Experiment Station are Sac, very early, Kanro, medium early, and Jogun, later. The Bansei is of about the same maturity date as Kanro and is widely grown in Iowa.

Minnesota

Garden varieties adapted to Minnesota growing conditions include Giant Green, Emperor, and Imperial. For freezing, Eva Blair, extension nutritionist, University of Minnesota, recommends Giant Green, Emperor, and Sousei. Among edible field varieties which may be grown in Minnesota are Mandarin, Manchu, and Minsoy.

Planting dates are similar to those for string beans or limas, that is after the arrival of settled warm weather.

In the garden, similar methods of cultivation to those used for common snap or lima beans may be used, although soybeans, having a larger habit of growth, do well with a little more room. The University of Illinois experiment station recommends a space of from 2 to 3 feet between rows, and 1⅛ to 1½ inches in the rows, when plenty of seed is available. Spacing the seed 3 to 4 inches apart, if there is only a small amount, allows for free branching and a phenomenal yield. Best planting depth is 1½ to 2 inches.

EDIBLES IN WASHINGTON

Three years ago the Irrigation Branch Experiment Station at Prosser, Wash., started investigations as to the production and utilization of the green edible soybean under irrigation in that state. The Western Regional Research Laboratory, USDA of Albany, Calif., has cooperated with the station by furnishing a viner for the vining operations and is studying the possibilities of freezing the green soybean. The U. S. Fruit and Vegetable Products Laboratory of Pullman is conducting canning studies with this vegetable.

The green edible soybean is not a difficult crop to grow, the station finds. The crop is planted during the first two weeks of May and requires from 120 to 130 days to reach the green bean stage of maturity.

Bansei, a large-podded, and large-seeded soybean, has proven the most satisfactory variety tested from the standpoint of both quality and yield. On good soil and under good cultural practices, this variety has yielded approximately one ton of green shelled beans per acre. Giant Green is an early maturing variety that has also been found adapted. It requires 90 days from planting to the green bean stage of maturity, being somewhat larger in size but not as high in quality as Bansei.

SOYBEAN SPROUTS

Sprouting raw soybeans tends to improve their nutritive value, according to the trials of Gladys Everson, Helen Parsons and Harry Steenbock of the University of Wisconsin.

This offers another clue to possible methods of improving soybeans, which science already has converted into one of the most valuable protein feeds for animals as well as a useful food for man.

In these experiments the research workers germinated soybeans at 80° F. until they had short sprouts, then ran them through a meat grinder and dried them at room temperature.

—s b d—

RESULTS OF AN ILLINOIS SURVEY

Storage of soybeans in 29 Champaign County, Ill., elevators in 1942 was increased 41.6 per cent over the previous year, according to a survey recently completed by L. F. Stice, of the department of agricultural economics, University of Illinois College of Agriculture.

Replies to questionnaires received by Stice from these elevators indicate they had purchased and shipped 1,701,425 bushels up to January 1, 1943, as compared to 1,658,517 bushels during the same period last year.

On January 1 of this year, 617,309 bushels were stored in these elevators and 58,278 bushels were placed in Commodity Credit Corporation bins at these points, representing a total storage of 675,587 bushels, 55 per cent more than a year ago. Of the beans stored in elevators, 518,341 bushels (76.7 per cent) were for processors, 63,387 (9.4 per cent) for the elevators' accounts, 14,785 (2.2 per cent) for growers and 20,796 (3.1 per cent) for the CCC. Some of these stored beans have probably been shipped since January 1, Stice points out.

An estimated 139,824 bushels were said to be in the fields, although some have been harvested since January 1. Approximately 10 per cent of the crop (279,648 bushels) was stored on farms.

Shipments to January 1 were 102.6 per cent of last year's figures; quantity stored, 141.6; in storage on farms, 63.6, and on farms, 95.4. Of the total crop, 15 per cent was estimated to be on farms, both in fields and in storage.

Of the 29 elevators, 11 reported difficulty in getting shipping permits, eight in obtaining cars after receiving permits, six in getting both cars and permits and four had difficulty in selling soybeans. Despite these problems, three per cent more beans were shipped than a year ago, indicating that these difficulties lasted only for short periods.

The grade of soybeans in the Champaign territory was best in the state, Stice says, with elevators reporting only 8.7 per cent of those bought below No. 2 grade. Average discount on beans of lower grades was 2.4 cents a bushel, ranging up to 6.0 cents for one elevator. Factors causing discounts and the number of times each was mentioned in the questionnaires were foreign material, 19 times; damage and moisture, 15 each; splits, 14, and test weight, four.

With an estimated total of 2,796,484 bushels (after allowing for soybeans still to be bought) handled by these 29 elevators as compared to estimates of 2,792,000 bushels made last August, the managers' combined forecasts proved to be remarkably accurate, Stice adds.

SOY SPROUTS

Soybeans can be sprouted in a flower pot, sink strainer, or any container that has holes for drainage and can be covered. Soak overnight, place in container, cover, and leave in warm place. Flood with lukewarm water 4 or 5 times a day during sprouting period. Sprouts grow 2 to 3 inches long in 4 to 6 days. Use in raw salads, omelets, souffles, meat stews or fricassees.

15.6 Million Acres in 1943!

PROSPECTIVE 1943 acreage of soybeans to be grown alone for all purposes is 15,603,000 acres, according to the March 1 crop report of the U. S. Department of Agriculture. This is an increase of 9.7 percent, or 1,381,000 acres over the acreage planted in 1942.

Expected acreage in the North Central group of States is 12,137,000 acres, or about 77.8 percent of the acreage in the country.

War demands and the adaptability of soybeans for many commercial uses continue to give the impetus for acreage increases this season, and the expected level exceeds the 10-year average (1932-41) acreage by more than 120 percent.

If the prospective 1943 acreage planted alone, is attained, the acreage harvested for beans would be 12,143,000. This would exceed the 1943 goal by about one percent.

See table of soybean production by states on next page.

Seed Directory

OHIO

Eaton — Mason Montgomery's Sons, 220 bushels registered Richlands, 200 bushels registered Dunfields, 500 bushels registered Sciotos.

Hillsboro — A. R. Kinzer, 100 bushels Illini, 100 bushels Chief, 100 bushels certified Dunfield.

Ada — J. R. Spar, 300 bushels registered Dunfields, also Ohio Certified Hybrid Corn.

IOWA

Boone — Roscoe Marsden, Rt. No. 1, 700 bushels certified Richland, germination 90 percent.

Hudson — Strayer Seed Farms, 200 bushels Kingwa, 300 bushels Mandell, 400 bushels Manchu.

Marcus — John Sand, 2,000 bushels certified Richland, 2,000 uncertified Richland, 300 bushels Mandell.

INDIANA

Knightstown — R. Cannell, Mgr. Hackleman Farms, 300 bushels certified Chief, 150 bushels Richland, 200 bushels Illini.

Hobart — Roland W. Miller, 400 bushels blue tag Dunfields.

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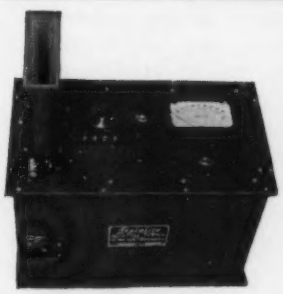

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Seed Trade News

Bible of the Seed Industry

Of vital interest to growers, wholesale and retail dealers. Only weekly newspaper for the industry. **Up-to-minute production, merchandising and trade news.** Subscription — $2.00 per year. Sample copy on request. Service — free and friendly.

109 No. Dearborn St., Chicago, Ill.

SOYBEAN PRODUCTION 1941-1943

State	Acreage harvested* 1941	Acreage harvested* 1942	Production 1941	Production 1942	Indicated 1943 acreage	1943 as percent of 1942
	Thousand acres		Thousand bushels		Thous. acres	Pct.
New York	12	24	180	384	37	110
New Jersey	9	23	117	414	65	108
Pennsylvania	15	35	225	595	173	160
Ohio	674	1,253	13,143	28,819	1,541	107
Indiana	815	1,417	13,855	29,757	1,866	108
Illinois	2,338	3,514	49,098	73,794	4,216	107
Michigan	100	220	1,400	3,740	225	82
Wisconsin	37	83	36	210	150	94
Minnesota	80	273	555	1,079	413	100
Iowa	942	1,872	1,200	3,549	2,422	110
Missouri	187	500	16,014	39,312	798	114
South Dakota	3	14	2,150	7,500	30	158
Nebraska	20	40	220	560	82	150
Kansas	47	212	564	2,544	394	136
Delaware	30	42	345	672	81	123
Maryland	20	43	240	666	125	125
Virginia	51	115	638	1,782	235	120
West Virginia	2	2	26	25	53	133
North Carolina	176	300	1,760	3,900	495	114
South Carolina	12	12	90	96	53	110
Georgia	16	12	109	86	127	120
Kentucky	42	82	567	1,066	246	110
Tennessee	20	75	180	900	235	105
Alabama	24	38	144	228	328	110
Mississippi	71	203	746	2,842	525	105
Arkansas	116	239	1,740	3,585	396	120
Louisiana	17	85	196	1,148	186	120
Oklahoma	2	9	16	81	31	97
Texas	3	25	33	225	75	163
U. S.	5,881	10,762	105,587	209,559	15,603	109.7

*Equivalent solid acreage. (Acreage grown alone, with an allowance for acreage grown with other crops.)

Note: 1943 acreage figures are for total acreage to be planted for all purposes. Those for 1941 and 1942 are acres harvested for beans.

A good crop of soybeans will grow on good land without proper inoculation —but it grows at an extra cost of at least $10 per acre in nitrogen **taken from the land.**

Neither prior crops nor the presence of nodules guarantee the proper inoculation necessary to take this nitrogen "Free From the Air."

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"THE PEER OF THE BEST"

Guarantee proper inoculation at a cost of only pennies per acre

TOP RANKING QUALITY AT NEW LOW PRICES

2 bushel size	$ .30
5 bushel size	.45
25 bushel size	1.95
30 bu. size (6-5 bu. cans)	2.60

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HUTCHINSON
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Today, when conservation of vital soybean products is a matter of national concern, you owe it to your fellow countrymen to safeguard your shipments in every way possible.

Take no chances with bags of mediocre quality. Chase commends to you its sturdy Chase Test cotton fabric—a heavy-duty, tight-weave material made to take a lot of buffeting around.

Bags of Chase Test are made in all standard sizes—perfectly printed as you wish. Send for samples.

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GENERAL SALES OFFICES
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★ GRITS AND FLAKES ★

FROM THE INDUSTRY

Harold Von Riesen has recently accepted a position with the Seedburo Equipment Company, which firm is well known to the trade for supplying grain and seed testing equipment.

Mr. Von Riesen is a graduate of the University of Nebraska College of Agriculture with a B.Sc. degree. He will assist L. M. Smith and P. W. Burrows in the handling of testing equipment.

Mr. Von Riesen was Junior Supervisor of Grain Inspection to Assistant Marketing Specialist in the U. S. Department of Agriculture for a considerable time, where he had a wide experience in checking testing equipment for the government, both in Chicago and throughout the Middle West.

A new enlarged biological laboratory has been opened at Decatur, Ind., by the McMillen Feed Mills, a division of Central Soya Co., Inc.

Ralph C. Holder is in charge and will conduct nutritional research on poultry and livestock feeding.

Mr. Holder, while in the Bureau of Chemistry with the United States Department of Agriculture, conducted some of the first investigations on soybean meal for poultry feeding. He also conducted extensive research on dried buttermilk for poultry while with the Collis Products Company.

Adel Clay Products Co., Adel, Iowa, has received an O.K. from the WPB for the erection of a soybean processing plant at its plant west of Adel, H. R. Straight, manager of the company, announced. The plant as designed will process 50 tons of soybean meal and 20 tons of oil per day. A circular building will form the nucleus of the plant and an 800-ton storage building is to be erected. The power plant from the Clay Products Co. will be available for the soybean plant.

Problems relating to the transportation difficulties experienced by the industry were discussed at the recent meeting of the Soybean Processors Industry Advisory Committee of the Food Distribution Administration, says the Department of Agriculture. The committee recommended a thorough examination of tank cars for leaks and dirt before shipping "empties" to crushing mills. Special task committees were appointed to work on such industry matters as determining the discounts for off-grade oil from field damaged beans and a survey of the industry's requirements of hexane and other petroleum derivatives used in the solvent extraction of soybean oil.

Plans have been made to hold the 34th annual meeting of the American Oil Chemists' Society in New Orleans, May 12 to May 14, 1943. The Roosevelt Hotel has been selected as headquarters for the convention.

The local committee, headed by Dr. K. S. Markley of the Southern Regional Research Laboratory, New Orleans, La., is arranging a balanced program of papers which will include chemical, analytical, technological, industrial, and economic phases of the production and utilization of fats and oils.

The members of the New York Produce exchange have adopted a resolution "that the Commodity Credit Corporation and all other Government Agencies be urgently requested to stop offering soybean oil meal and other vegetable proteins direct to consumers through County Agents, and instead make available this tonnage of protein ingredients *through the regular established channels of distribution.*

F. J. Matchette, 80, a partner in The Nitragin Co., Milwaukee producers of plant inoculants, died in New York on Feb. 24. Mr. Matchette was a brother of L. D. Matchette, the active manager of the Milwaukee firm. The deceased was active in financial circles in New York where he made his home.

A dozen or more cars of soybean meal shipped by the CCC and intended for Missouri farmers, were seized by the Missouri feed control authorities because of the failure of the government agency to register it in the state. Feed companies objected to the handling of the meal by the government, when mixed feeds were short on the ingredient, reports *Flour & Feed.*

The state of Iowa has also taken action to insure compliance by CCC with the Iowa feed law. Several cars of CCC meal have been held up for lack of compliance with the labeling law.

Chester D. Salter, formerly vice-president of Quail & Co., is now associated in an executive capacity with Honeymead Products Company of Cedar Rapids, Iowa, it is announced.

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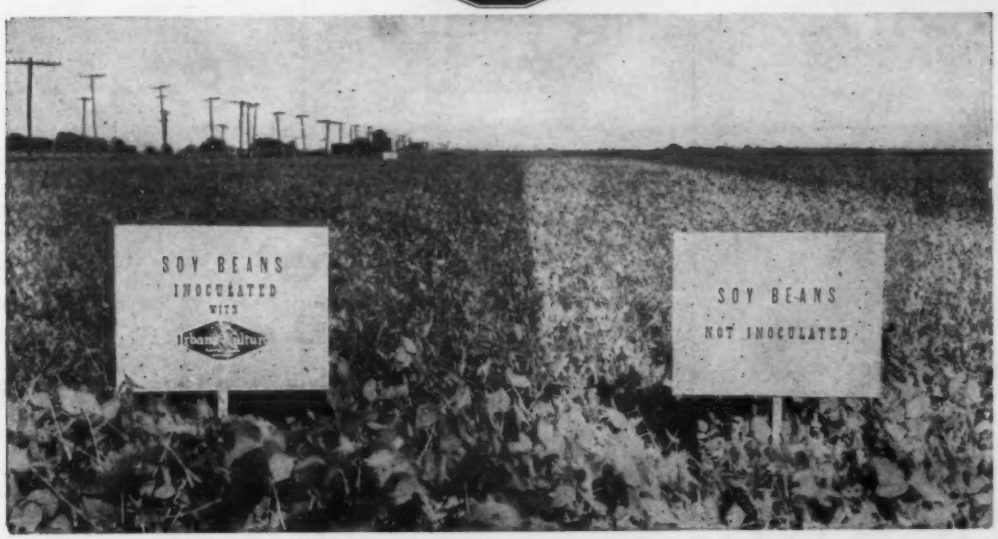
SOY BEANS for VICTORY



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SOYBEANS BEST MEAL PRODUCERS

As producers of high-protein meal, soybeans are far in the lead of any other crop, reports the Bureau of Agricultural Economics. However, peanuts and flaxseed are somewhat in the lead as yielders of oil.

On the basis of the averages for the United States, peanuts rank highest in oil yield per acre, exceeding flaxseed by over 20 percent, soybeans by nearly 30 percent, and cottonseed by 200 percent. Soybeans produce over 2½ times as much high-protein meal per acre as flaxseed or peanuts, and nearly 4½ times as much as cottonseed. Combined yields of oil and meal per acre are 1,081 pounds from soybeans, 539 pounds from peanuts, 511 pounds from flaxseed, and 278 pounds from cottonseed.

State-by-state comparisons show that peanuts have a higher potential yield of oil per acre than any other oil crop in all states where peanuts are grown commercially except California, where flaxseed produced on irrigated land has a high yield per acre. Soybeans have the greatest potential yield of meal per acre in all states where they are grown except Alabama. Their margin of superiority over peanuts and cottonseed is considerably less in the southern states than the margin indicated by the national averages. In most of the southern states, cottonseed yields more oil per acre than soybeans. Flaxseed also yields more oil per acre than soybeans in states where it is grown.

—s b d—

INDIAN DIET

(Continued from page 4)

tained from the projects for the improvement of the nourishment of the people, which are going to be undertaken by the government of Mexico and the Inter-American Indian Institute, undoubtedly the cultivation and the use of the soybean as food will rapidly become general in the whole Republic, with great advantage to the physical development of its inhabitants and with an increase in agricultural and industrial production.

The Institute plans to extend to other countries of the Continent instruction in the cultivation of the soybean and its use as food, as soon as the initial project in the Valley of Mezquital, Mexico, is completed.

—s b d—

SOYA KITCHEN

(Continued from page 2)

where for the use of soy flour and wheat flour in baked products in much higher percentages. In testing such percentages up to 25 percent (using 4 tablespoonfuls of soy flour in the cup of wheat flour), it was found that they were entirely practical for a great many of the bread, cake and pie recipes in household cookbooks, provided still more liquid and still more salt were added.

Officials of the Soy Flour Association advise that commercial companies, preparing to distribute soy flour and other soy products to retail stores sometime in the near future, are contacting the Association frequently for assistance on recipes which may be printed on packages for retail trade. There are some indications that the probable big increase in retail merchandising of soy flour and soy grits is about to begin. Some companies, with merchandising power and pressure, indicate that they hope to get started in a national way in April or May. It is expected that there may be a substantial increase in retail merchandising with soy flour and grits more readily available in retail stores by July or August.

We are buying YELLOW SOYBEANS

We are in the market for yellow soybeans in truck or carload lots. Get in touch with our buyers at the following soybean plant locations.

BUFFALO, N. Y.
98 Delaware Avenue
Phone Cleveland 5850

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Phone Franklin 3437

DECATUR, ILL.
Phone 5365

DES MOINES, IOWA
East 3rd and Market Sts.
Phone 4-7291

SPENCER KELLOGG AND SONS, INC.
Administration Office: Buffalo, N. Y.

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Analysis of
SOYBEANS AND PRODUCTS
Official Chemists for National Soybean Processors Association

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IN THE MARKETS

STANDARD SHORTENING SHIPMENTS

By Members of Institute of Shortening Mfgs., Inc.

Week ending March 6, lbs.	12,509,869
Week ending March 13	11,002,758
Week ending March 20	11,751,768
Week ending March 27	12,607,886
Week ending April 3	13,401,272

• **SOYBEAN INSPECTIONS.** Almost two-thirds of the market receipts of soybeans inspected in February graded Sample this season, inspectors' reports to the Grain Products Branch of the Food Distribution Administration show. About half of the January inspections were Sample grade.

Of the inspected receipts October-February, 30 percent fell into Sample grade, compared with only 4 percent for the corresponding period last season. About 37 percent of this season's receipts graded Nos. 1 and 2, however, compared with 33 percent for the same period last season. The quantity grading No. 3 this season is much smaller than last year. Out of 43,040 cars inspected October through February, 41,751 classed as Yellow.

Total Inspected Receipts of Soybeans as Car Lots
Five-Month Period Oct. 1, 1942-Feb. 28, 1943

Total receipts of soybeans inspected under the United States Grain Standards Act at markets in the following states at which licensed grain inspectors are located. Truck lots, barge and other cargo receipts are included as car lots at 1,500 bushels per car:

Period 1942-43	Total Car Lots — Illinois	Indiana	Iowa	Missouri	Ohio
Oct. 1-15	3,752	702	370	75	536
Oct. 16-31	6,118	718	1,117	117	1,893
Nov. 1-15	1,554	229	596	112	716
Nov. 16-30	1,866	245	289	158	406
Dec. 1-15	1,060	331	188	319	386
Dec. 16-31	813	431	267	674	604
Jan. 1-15	684	362	202	274	381
Jan. 16-31	484	294	177	438	320
Feb. 1-15	1,132	168	219	593	218
Feb. 16-28	994	141	227	367	201
Total	18,457	3,621	3,652	3,127	5,661

• **SOYBEANS IN LEND-LEASE**

Purchased by Agricultural Marketing Administration for lend-lease.

Commodity	Quantity (Pounds) — January	1942	Cumulative
Fats and Oils			
Oleomargarine	682,780	31,842,058	33,644,839
Salad Oils, Edible	22,037,120	87,597,101	109,634,221
Shortening	3,622,080	3,926,615	7,548,695
Soya Products			
Soy Beans	7,011,200	18,679,360	42,134,400
Soy Flour and Grits	6,431,040	24,785,600	42,571,200
Soya Sauce	—	7,554	7,554

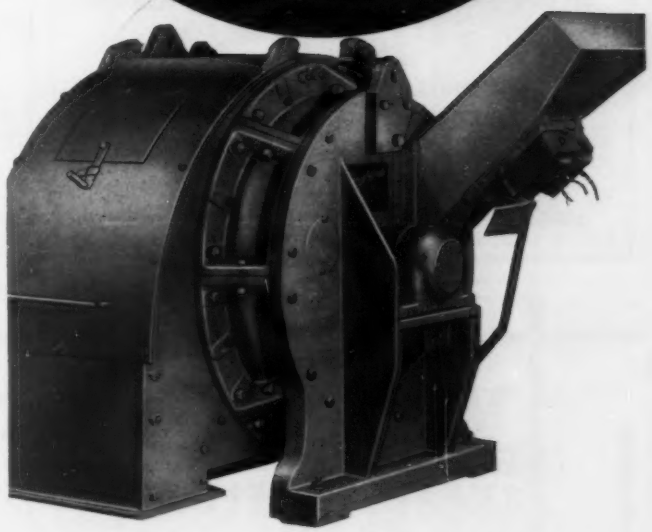
• **SOYBEAN OIL IN MARGARINE.** Fats and oils used in the manufacture of margarine in 1942 totaled 347 million pounds of which 87 percent was domestic vegetable oil, 11 percent animal oil and fat, and 2 percent foreign vegetable oil. Leading ingredient was cottonseed oil, which accounted for 48 percent of the total. Quantity of soybean oil used was greater than in any previous year, constituting 38 percent. Cottonseed oil, soybean oil, and oleo oil probably will be the principal fats used in margarine manufacture in 1943.

A total of 16,513,181 lbs. of soybean oil entered into the production of margarine in January 1943, as compared with 6,905,594 lbs. the same month last year.

• **SOYBEAN PRODUCTION** by states and counties for 1941 and 1942 is covered by the Bureau of Agricultural Economics, Washington, in a March release. The 15 states of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Delaware, Maryland, Virginia, North Carolina, Mississippi, and Arkansas are included. Total acreage, yield per acre and production in bushels are shown for counties as well as for states.

Stocks of soybeans in commercial storage March 16 were 3,217,705 bu., according to the commercial grain stocks report. March 23, 3,498,705 bu. March 30, 3,375,705 bu. April 6, 3,186,705 bu.

The STANDARD OF THE INDUSTRY . . . PRATER DUAL SCREEN MILLS



There are more Prater Dual Screen Grinders in operation in Soya processing plants today than any other make.

THE REASONS: One — complete adaptability of the Prater Triple Reduction Principle to the grinding job at hand. Second — complete and thorough knowledge of the needs of the industry for grinding equipment. For complete information — send the coupon to Prater Pulverizer Company, 1825 S. 55th Ave., Chicago.

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● **SOYBEAN CRUSHING.** Crushings of soybeans in the first quarter of the new crop year (October to December 1942) amounted to 25 million bushels, a new peak, compared with the previous peak of 20.5 million bushels in January-March 1942, reports the Bureau of Agricultural Economics. The rate of crushing is expected to increase still further in 1943, with southern cottonseed mills, East Coast linseed mills, and Pacific Coast copra mills processing large quantities of beans under arrangements with Commodity Credit Corporation. Mills in the main soybean producing area have a maximum crushing capacity of about 25 million bushels per quarter. On the basis of the estimated production of 210 million bushels and a carry-in of 6 million bushels at the beginning of the marketing year, and with an allowance of 30 million bushels for seed and feed, about 160 million bushels remained available for crushing on January 1, 1943. This figure includes 25 million bushels estimated by the Crop Reporting Board to have been still unharvested on January 1, however.

Factory production of primary fats and oils totaled 907 million pounds in December, an increase of 72 million pounds over the November figure. Production of vegetable oils declined 1 million pounds to 416 million pounds. A seasonal decline of about 16 million pounds in production of cottonseed oil was more than offset by an increase in the output of soybean oil.

● **COUNTRY MOVEMENT.** The country movement of soybeans has been slow. Farmers evidently are busy with farm work and are not interested in shipping at the present time. Movement from first hands is expected to remain small until after seed requirements are taken care of. The quality of beans arriving at Chicago has improved somewhat, indicating that evidently some of the beans are coming out of storage. Local processors have been anxious buyers, and it was observed that some of the local processors are bringing in beans from their outside storage points.

Soybean meal continues in urgent request and buying interest exceeds the available supplies at this time as mills are still occupied in filling orders contracted some time back.

—s b d—

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Analysis of Soybeans and Products

Official Chemists for National Soybean Processors Association

Always Dependable!

WOOD'S IMPROVED YELLOW SOYBEANS

AN outstanding edible strain originated by T. W. WOOD & SONS. A variety which is becoming more and more popular throughout the country. Far superior to any other yellow bean . . . has a protein content of 44% . . . an excellent source of Vitamins B and G. For full information, write —

T. W. WOOD & SONS

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SEEDSMEN SINCE 1879

GOVERNMENT ORDERS

● **PROCESSING PROGRAM.** In connection with the food program being carried out under Executive Order No. 9280 the Secretary of Agriculture has assigned to Commodity Credit Corporation responsibility for the formulation and administration of programs relating to the processing of oilseeds. The Corporation is also initially responsible for recommendations with respect to priorities for materials, equipment, and supplies incident to such processing.

Applications for priority assistance should be filed with the War Production Board with a request that they be brought to the attention of Commodity Credit Corporation. Requests for preference ratings on materials or equipment to make emergency repairs or replacements should be telephoned or telegraphed to C. H. Neal, Chief, Priorities Service Group, Commodity Credit Corporation, Room 6634 South Building, Department of Agriculture, Washington, D. C.

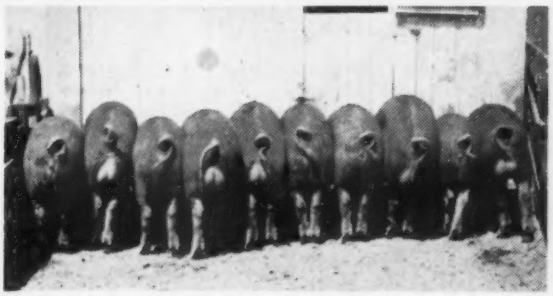
● **ALLOCATION OF EDIBLE OILS.** Movement of peanut, soybean, cottonseed, and corn oils into commercial channels will be controlled on a monthly allocation basis, effective April 16, Secretary Wickard has directed under Food Distribution Order 29. The order was considered necessary to provide satisfactory distribution of available supplies which are considered adequate to meet immediate military and civilian requirements, but only the most urgent requirements of the Allied Nations. The margin of supply, however, is so small that satisfactory distribution is not possible without allocation. Each month an allocation of each of the four oils will be made according to civilian and war agency requirements. Permits to ship or receive must be obtained by these buyers and sellers. The order will be supplemented by detailed instructions to the industry.

● **IMPORTED MEALS.** Maximum prices for imported soybean, cottonseed, and peanut oil meals and oil cakes were established in March by the Office of Price Administration in line with those already set for domestic.

OPA provided that first sales of these commodities within the United States must be at a price no higher than a like sale of domestic meal or cake by a processor located at the port of entry. Subsequent sales will take the same mark-up as would those originating with a domestic processor.

The amendment also deletes a reference to the processor's prices being f.o.b. his plant and states simply that his maximum shall be the highest price he is allowed under his contract with the Commodity Credit Corporation.

● **HIGHER SUPPORT PRICES.** A guarantee of higher support prices for five protein crops including soybeans has been announced by Food Administrator Chester C. Davis, according to press releases. Support price of yellow soybeans has been raised from $1.70 to $1.80 a bushel, according to these reports. This is higher than present OPA ceilings, but announcement did not make clear whether an increase in ceiling prices is contemplated. The present ceiling price is $1.66. Premiums and discounts will be made as previously announced so as to give an advance of 10 cents a bushel for other classes and qualities of soybeans. Farmers who store their soybeans on the farm under a CCC loan will receive, in addition, a storage payment of 7 cents a bushel. Other crops covered by the order are dry beans, dry peas, peanuts and flaxseed.



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- FAMOUS *Funk Farms* FIELD SEEDS
- FUNK'S 'G' HYBRID SEED CORN

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BURLAP AND COTTON BAGS

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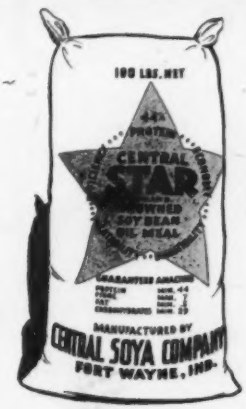

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MORE . . . . More soybeans — more eggs, more milk, more meat! Soybean oil meal, and soybean oil are now a matter of defense production and we must work accordingly. A big job ahead for the grower and feeder, for the elevator, processor, feed manufacturer — a vital job that must be done well.

Soybeans hold a double value for the grower-feeder — a good cash crop, and a major source of protein for feeds.

Growers and feeders in the areas served by our plants will find us prepared — to handle their increased acreage of beans, and to furnish them with properly balanced feeds for increasing growth and production in livestock and poultry.

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BRAND
41%
SOYBEAN
OIL MEAL

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MILLS: DECATUR, IND., and GIBSON CITY, ILL. GENERAL OFFICES, FORT WAYNE, IND.

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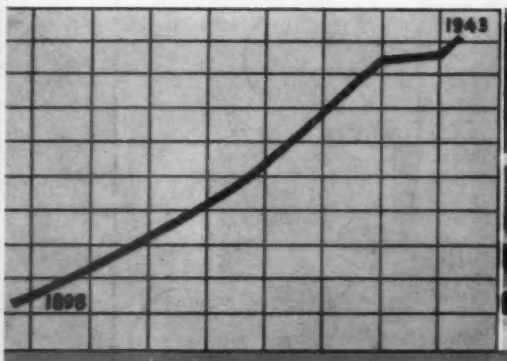
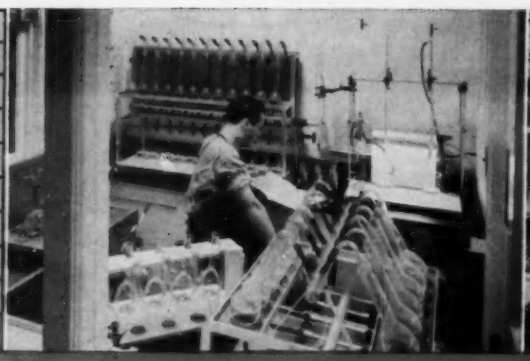


NITRAGIN SALES CLIMB EVERY YEAR NITRAGIN was the first commercial inoculant in the world. Since 1898, NITRAGIN has been the leader in sales, establishing new, high records each year.



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CONTAINS ONLY SELECTED TESTED GUME BACTERIA The nitrogen-fixing ab the legume bacteria in NITRAGIN is determi inoculating and testing plants in the Nitragin Co own greenhouse.

FIELD TESTED Actual field tests furnish the final proof of the effectiveness of NITRAGIN inoculation, as shown by increased yields, higher protein content, and quality of the seed and crops.

SCIENTIFIC PACKAGING NITRAGIN'S container maintains the quality of the inoculant, tests show bacterial growth continues in the moist humus and the number of bacteria is actually increased after packing.

SOYBEAN RESEARCH Results of soybe oculation research, farm tests, and experiment findings are published in folders prepared b Lewis Erdman, Nitragin bacteriologist. Write for

Legume inoculation must be purchased on faith. You can't see inoculating bacteria without a microscope and there is no way to compare the effectiveness of different brands before you buy. That's why your best guarantee of quality in an inoculant is its past performance and the reputation of its maker.

NITRAGIN is the oldest, most widely used inoculant for soybeans and other legumes. Farmers have had FAITH in NITRAGIN for over 40 years. To build and improve the effectiveness of NITRAGIN, scientists carry on an extensive program of research and testing to find better strains of nitrogen-fixing bacteria and to improve the product in other ways. It will pay you to keep these facts in mind when you buy inoculation.

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FRESH – HIGH BACTERIA COU
Read Guarantee
MANY BILLION LEGUME BACTE
HIGHEST QUALITY AT LOWEST COST
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The registered tradename NITRAGIN identifies the oldest, most widely used brand of inoculation. Ask for NITRAGIN inoculation at your seedsman.

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